

CERTIFICATE OF CONFORMITY

- HAZARDOUS (CLASSIFIED) LOCATION ELECTRICAL EQUIPMENT PER US REQUIREMENTS**
- Certificate No:** FM16US0296X
- Equipment:** Model abcdefg, adbcdefgh and abcd
(Type Reference and Name) Electronic Digital Meter.
- Name of Listing Company:** Great Plains Industries Inc
- Address of Listing Company:** 5252 E 36th St North, Wichita KS 67220
- The examination and test results are recorded in confidential report number:
1N5A3AX dated 21st May 1987
- FM Approvals LLC, certifies that the equipment described has been found to comply with the following Approval standards and other documents:
FM Class 3600:2018, FM Class 3610:2018, FM Class 3611:2018, FM Class 3810:2005
ANSI/UL 60079-0:2020, ANSI/ISA 60079-11:2014, ANSI/UL 121201:2017,
ANSI/IEC 60529:2004, ANSI/ISA 61010-1:2004
- If the sign 'X' is placed after the certificate number, it indicates that the equipment is subject to specific conditions of use specified in the schedule to this certificate.
- This certificate relates to the design, examination and testing of the products specified herein. The FM Approvals surveillance audit program has further determined that the manufacturing processes and quality control procedures in place are satisfactory to manufacture the product as examined, tested and Approved.
- Equipment Ratings:**
Intrinsically safe for Class I, II, III, Division 1, Groups A,B,C,D,E,F and G hazardous (classified) locations, Temperature Class T4; Nonincendive for Class I, Division 2, Groups A,B,C and D, also suitable for Class II and III Division 2 Groups F & G hazardous (classified) locations, Temperature Class T4.

Certificate issued by:



J.E. Marquedant
VP, Manager - Electrical Systems

3 November 2020

Date

To verify the availability of the Approved product, please refer to www.approvalguide.com

THIS CERTIFICATE MAY ONLY BE REPRODUCED IN ITS ENTIRETY AND WITHOUT CHANGE

FM Approvals LLC. 1151 Boston-Providence Turnpike, Norwood, MA 02062 USA
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11. The marking of the equipment shall include:

Class I, II, III, Division 1, Groups A, B, C, D, E, F, G; T4 Ta = -40°C to +54°C;

Class I, II, III, Division 2, Groups A, B, C, D, F, G; T4 Ta = -40°C to +54°C;

12. **Description of Equipment:**

General - The Electronic Digital Meters, models 03, 04, 05, 06, 07, 08 09, A1, A2, G2 and N2 are battery powered turbine flow meters. The meters contain a turbine assembly, microprocessor and LCD readout and are designed for measuring batch or cumulative quantities of liquids including fuels. Each turbine assembly is contained in a housing made of brass, aluminum, stainless steel, nylon or PVDF plastic. The plastic versions are carbon-filled and electrically conductive. Process pressure rating varies depending on the enclosure material and construction. The display cover assembly is clear plastic and all of the electronics except for the batteries and the LCD display are completely encapsulated (the Q1, Q9 and R9 versions are conformal coated). A remote kit option is also available that permits the electronics assembly to be mounted up to 100 feet (30 meters) from the turbine assembly.

Ratings - The ambient operating temperature range of Electronic Digital Meters are -40°C to 54°C.

The apparatus is powered by two FDK Lithium CR12600SE 3V batteries (GPI battery 902004-02), while the Q1, Q9 and R9 versions use Energizer E92 / EN92, or Duracell MN2400 Alkaline batteries connected in series. There are no other terminals for customer connection, Q9 versions have one terminal connection for a coil.

Model abcdefg. Electronic Digital Meter.

a = Product Identifier A1 or A2.

b = Computer Assembly 01,02,03,04,05,06,07,08, 09, Q9, R9 or XX.

c = Factory Calibration G, L, Q, Z, P, B, U, M, F, I, J, O or X.

d = Time Base M, S, H, D or X.

e = Turbine Housing A025, A050, A075, A100, A150, A200, B050, B075, B100, B150, B200, N025, N100, P050, P100, S025, S050, S075, S100, S150, S200, V025, V100, X025, X050, X075, X100, X150, X200, Z050, Z100, XXXX or 0000.

f = Fitting N, I, B, T, F, X or 0.

g = Packaging A1, A2, B1, B2, B3, C1, C2, C3, C4, D1, D2, J1, J2, K1, K2, K3, K4, K5, L1, L2, L3, L4, L5, XX or 00.

Model abcdefgh. Electronic Digital Meter.

a = Product Identifier: G2 or N2.

b = Turbine Body Material: A, B, P, S, X or Z

c = Turbine Size: 05, 07, 10, 15, or 20

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- d = Fitting Type: N, I, X, T or F
- e = Computer Assembly: 03, 04, 05, 06, 07, 08, 09, 19, Q1, Q9, R9 or XX
- f = Factory Calibration: G, L, Q, Z, P, B, U, M, F, I, J, O or X.
- g = Time Base M, S, H, D or X.
- h = Packaging kit: A, B, C, D or E

Model abcd. Electronic Digital Meter.

- a = Computer Assembly 03, 04, 05, 06, 07, 08 or 09.
- b = Housing/Turbine Assembly A, N or S.
- c = Flow Range 11, 12, 13, 30, 31, or 32.
- d = Factory Cal. Units GM, LM or GMME.

13. Specific Conditions of Use:

1. All computer assemblies are to be used with GPI battery 902004-02 except Q1, Q9 and R9 versions which use Energizer E92 / EN92, or Duracell MN2400 Alkaline batteries.
2. GPI remote kit assembly 113275-1 may be used with the meter when installed in accordance with GPI Manual No.920507-01. GPI Remote Kit Assembly 113275-10 may be used with the meter when installed in accordance with GPI Manual No. 920507-02.
3. The apparatus enclosure may contain aluminum which is considered to constitute a potential risk of ignition by impact or friction. Care must be taken into account during installation and use to prevent impact or friction.
4. Part of the enclosure is constructed from plastic. To prevent the risk of electrostatic sparking the plastic surface should only be cleaned with a damp cloth

14. Test and Assessment Procedure and Conditions:

This Certificate has been issued in accordance with FM Approvals US Certification Requirements.

15. Schedule Drawings

A copy of the technical documentation has been kept by FM Approvals.

16. Certificate History

Details of the supplements to this certificate are described below:

Date	Description
21 st May 1987	Original Issue
25 th October 2016	<u>Supplement 10:</u> Report Reference: – Project ID 3059125 dated 25 th October 2016. Description of the Change: Updated to taller threads and end fittings for process sealing. Process Pressure testing conducted. No changes to certificate other than

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	being updated to new format.
3 rd November 2020	<u>Supplement 11:</u> Report Reference: – Project ID PR457103 dated 3 rd November 2020. Description of the Change: Updated for new computer display assemblies Q1, Q9 and R9. Relocated the rotation sensing coil. Updated standards to current editions. Updated Specific Conditions of Use. Changed to T4, Ta=54°C

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